

NOTES ON THE BIOLOGY OF CHYLIZA NOTATA (DIPTERA, PSILIDAE).

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Chyliza notata seems to be widely distributed but little seems to be known of its habits. While working on the biology of insects which were potential vectors of the Dutch elm disease fungus, certain incidental information was picked up on *C. notata* which may be of interest to other workers.

The adults of *C. notata* are attracted to exposed wounds on the trunk, branches or cut logs of elm. They apparently feed on the sap and then oviposit around the margins of the wounds. The larvae tunnel between the bark and wood into the healthy tissue, forming broad gouged out areas around the wound. Large numbers of larvae are sometimes found around a single wound. When development is complete, the puparium is formed under the bark.

The length of the life cycle is apparently quite variable, and is probably correlated with the amount of moisture present. In one rearing cage, larvae developing from eggs laid during the last two weeks of June, gave rise to adults the last part of May of the following year. In another cage, a single specimen of *C. notata* emerged on July 3rd from a log which had been exposed to attack during the last week in May and the first week in June of the same year; in this case development from egg to adult was completed in about one month. However, this same material produced another adult on May 22nd of the following year; nearly a year was required to complete the life cycle of this individual.

Most of the emergence of *C. notata* from caged material was in May, but adults were found to be common in the field in July and August as well.

C. notata probably is not of importance as a vector of the Dutch elm disease fungus, but theoretically it could carry the organism from tree to tree. If coremia were formed in the broad patch-like tunnels of the larvae, the emerging adults might easily pick up the spores and carry them to wounds on healthy trees. It is possible also that feeding adults might pick up spores from the sap of a diseased tree and carry them to a wound in a healthy tree. In a favorable situation it is possible that the spores might germinate and produce infection.